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AUTHOR	Clark, Christopher M.
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ABSTRACT

This report describes a workshop combining training in questioning, explaining, and listening. When revised, the workshop will become part of the Model Teacher Training System being developed by the Stanford Center for Research and Development in Teaching. Questioning, explaining, and listening skills were presented in a workshop and were tried out in a tutoring laboratory (to be described in a subsequent report). The workshop is designed for general use with preservice and in-service teachers. Although the workshop functioned smoothly, a preliminary analysis of the tutoring laboratory study suggests that revision, particularly of the questioning skills segment, is required. An 18-item bibliography is included. (Author)

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A MODEL TEACHER TRAINING SYSTEM: QUESTIONING, EXPLAINING, AND LISTENING SKILLS IN TUTORING

Christopher M. Clark

School of Education
Stanford University
Stanford, California

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Introductory Statement

The Center's mission is to improve teaching in American schools. Too many teachers still employ a didactic style aimed at filling passive students with facts. The teacher's environment often prevents him from changing his style, and may indeed drive him out of the profession. And the children of the poor typically suffer from the worst teaching.

The Center uses the resources of the behavioral sciences in pursuing its objectives. Drawing primarily upon psychology and sociology, but also upon other behavioral science disciplines, the Center has formulated programs of research, development, demonstration, and dissemination in three areas. Program 1, Teaching Effectiveness, is now developing a Model Teacher Training System that can be used to train both beginning and experienced teachers in effective teaching skills. Program 2, The Environment for Teaching, is developing models of school organization and ways of evaluating teachers that will encourage teachers to become more professional and more committed. Program 3, Teaching Students from Low-Income Areas, is developing materials and procedures for motivating both students and teachers in low-income schools.

This report describes part of the work of the Training System Design component in the program on Teaching Effectiveness. It is a contribution to the development of the Model Teacher Training System.

Abstract

This report describes a workshop combining training in questioning, explaining, and listening. The workshop, when revised, will become part of the Model Teacher Training System being developed by the Stanford Center for Research and Development in Teaching. Questioning, explaining, and listening skills were presented in a workshop and were tried out in a tutoring laboratory (to be described in a subsequent report). The workshop is designed for general use with preservice and in-service teachers. Although the workshop functioned smoothly, a preliminary analysis of the tutoring laboratory study suggests that revision, particularly of the questioning skills segment, is required.

A MODEL TEACHER TRAINING SYSTEM: QUESTIONING, EXPLAINING, AND LISTENING SKILLS IN TUTORING

Christopher M. Clark

This report describes a workshop that combined training in questioning, explaining, and listening (QEL) skills, with particular reference to the use of these skills by teachers in tutoring situations.[1]

The tutorial mode of teaching and learning is becoming more important, both as a research tool and as a mode of instruction. For research, the tutorial mode permits an investigator to bypass many problems inherent in the complex social situation of a classroom. Fundamentally significant teaching and learning processes are more likely to be observable in interaction between two people. As a mode of instruction, tutoring is being rediscovered by forward-looking teachers and educators.

> The ongoing improvement of programmed and computerized instruction and other instructional media and methods suggests that in not too many decades, many previously human teaching functions will be carried out more efficiently by other means. The teacher of the future will perform only those functions which a human can perform uniquely well. The qualities of sensitivity, flexibility, spontaneity, and responsiveness demanded in the tutorial situation mark it as the probable role of tomorrow's teacher [Snow, 1969].

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[1] Another paper (Snow, 1972) gives an overview of the Model Teacher Training System now under development at the Stanford Center for Research and Development in Teaching. One element of the Model Teacher Training System will be used to train teachers in a number of technical skills, including questioning, explaining, and listening, that they will need in tutoring situations. This workshop was a preliminary stage in developing that part of the system.

Tutorial Communication Skills

There is wide variation in the procedures as well as the purposes of tutoring. No one best method of conducting a tutorial session can be expected. In large measure, the approach appropriate for a given situation depends on the objectives for that session and on the abilities, personalities, and needs of the two people involved. Yet, since all tutorial sessions are essentially extended two-way, face-to-face communications, there are likely to be several basic communication skills which, if developed, would contribute to the effectiveness of tutoring. Three of these basic communication skills are questioning, explaining, and listening--skills which are probably basic to teaching generally, not just to tutoring, but whose function and interrelation in teaching processes may be most clearly seen in two-person interaction.

Listening

The starting point for effective interpersonal communication is listening. If the tutor cannot listen effectively, responses to student questions will be inefficient, requiring repetition or rephrasing, or altogether inappropriate. Communication will be one-way more often than two-way. Concentrating on what the student is saying, organizing the main points before responding, and asking for clarification, if necessary, are essential elements in effective listening.

Explaining

The tutor must develop skill at extemporaneous explaining adapted to the specific needs of a situation. To be most effective explanations should be clear, complete, and valid, i.e., true (Copi, 1968; Hempel, 1965; Swift, 1961; Thyne, 1963), and should avoid vague words

(Miller, Fisher & Kaess, 1969). Two explaining techniques that have been found to be effective are the use of a rule-example-rule pattern (Rosenshine, 1968, 1969) and the inclusion of a short summary of the main points of the explanation (Copi, 1968).

Questioning

A tutor might find many types of questions useful: questions calling for simple recall of facts; questions calling for sets of related facts; and questions requiring the student to manipulate previously acquired information (higher order questions), which should lead toward the development of new concepts (Gagné, 1965; Koran, 1970). The words "why," "discuss," "explain," "interpret," "evaluate," "justify," and "compare" are useful in constructing higher order questions (Groisser, 1964). 1964). It may be helpful for a tutor to prepare some questions in advance and to list the key words or concepts expected in an adequate answer. Once a question is asked, the tutor's task is to help the student reach acceptable answers through skillful use of cues and prompts. It is helpful to reinforce correct aspects of the student's answer and to avoid negative comments or facial expressions that might cut off his participation.

The effectiveness of any tutorial technique is measured by how well the tutor uses such skills, how well he adapts them to particular learners, and how well the student performs. Since a student's reactions give valuable clues about not only the technique but the tutor's performance, an effective tutor must become a careful observer of his student's behavior and an instant critic of his own.

The Workshop

A tutorial skills workshop served as a first trial of the technical skills element of the Center's Model Teacher Training System. It consisted of a short intensive training experience developed and pilot tested at the Center in May 1971. The objective of the workshop was to help participants develop the skills of questioning, explaining, and listening in the context of a tutorial situation. Practice sessions in explaining and questioning as well as a complete practice tutorial session were included. The workshop required approximately twelve hours to complete. It was intended to be appropriate for preservice, vestibule,[2] and in-service teachers. Each participant was supplied with a workbook, which was the central element in the workshop package. Supplementary materials included an audiotaped program for listening training, a demonstration videotape for the explaining practice session, four 16-mm films that demonstrate questioning behavior, and a cassette recorder for use by each pair of participants during the practice sessions. The sequence of events in the workshop was as follows:

Introduction	10 min.
Listening Training	2 hrs.
Explaining Training	2 hrs.
Explaining Practice	1 hr.
Questioning Training	2 hrs.
Questioning Practice	2 hrs.
Tutorial Practice	2 hrs.

[2] According to Snow (1972, p.7), "the concept of vestibule training is borrowed from industry, where employees, no matter how or where educated, are given induction training to fit positions and functions in a particular organization. The educational professions appear to provide the only instances in our society where the receiving organizations accept academic products without systematic induction training of their own."

Listening Training

The listening training portion of the workshop consisted of an audiotape programmed instruction, "Effective Listening," produced by the Xerox Corporation (1963). The Effective Listening program provided the trainee with instruction, examples, and practice in the following listening skills: (a) constant analysis of what is being said; (b) organization of statements into main points and supporting reasons; (c) outlining by use of key words; (d) discrimination between relevancies and irrelevancies; (e) overcoming distraction. Although the content of most of the exercises included in this program was taken from the business world, the basic listening skills practiced are certainly relevant to educational contexts, particularly in the tutorial mode. Research at Stanford Center for Research and Development in Teaching by McKnight (1969) and Lundgren (1972) indicates that the Xerox Effective Listening program produces substantial gains among preservice teaching interns, when the Xerox pretests and posttests are used. It has not yet been shown to affect teachers' classroom behavior.

Explaining Training and Practice

The explaining training portion of the workshop consisted of a manual entitled "How to Explain." This manual is a modification of one developed at the Center by N. L. Gage and Robert Miltz (Miltz, 1972). It contains descriptive material and brief paper-and-pencil exercises which illustrate important aspects of an effective explanation. Each participant read through the manual and performed the exercises included.

The How to Explain manual is organized into five lessons with thirteen parts:

Lesson 1- How to listen to questions.

Lesson 2- How to pick out the main points in the question.
How to determine the relationship between these points.
How to determine the general principle involved.

Lesson 3- How to apply the principle to the relationship.
How to make the explanation valid.
How to make the explanation simple.
How to make the explanation clear.

Lesson 4- How to focus attention on important points.
How to use the rule-example-rule pattern.
How to avoid vague words.
How to summarize.

Lesson 5- How to put the entire explaining act together and practice it as a whole.

After completing the five lessons in the How to Explain manual, the participants were paired for the explaining practice session. A videotape demonstrating the procedures to be followed in the practice session was shown, and each pair of participants was issued a cassette tape recorder and given operating instructions. The purpose of the tape recorders was to provide the participants with accurate feedback for the critique phase of the practice session. The practice procedure was as follows:

1. The first participant read a provided question aloud.
2. The second participant responded to the question with an explanation.

3. The tape-recorded explanation was replayed, and both participants criticized the explanation using an outline of the important elements of a good explanation as a guide.
4. The question and the explanation were repeated in an attempt to improve upon the first explanation.
5. The entire procedure was repeated using a new question and with the roles of the participants reversed.

Questioning Training

The materials for the questioning training portion of the workshop consisted of a manual entitled "Effective Questioning" and four 16-mm films. The manual is an adaptation of an elementary-level minicourse developed by the Far West Laboratory for Educational Research and Development (Borg, Kelley, & Langer, 1970); the films were part of this minicourse. The workshop participants individually read through the Effective Questioning manual. Part One of the manual contained descriptive material and examples illustrating questions calling for a set of related facts and higher order questions. Part Two described and illustrated the probing techniques of prompting, seeking clarification, and refocusing. A short multiple-choice test was included at the end of each of these two chapters for the purpose of reviewing important points made in the manual.

When all participants had completed Part One of the Effective Questioning manual, two films were shown to the group. The first film described the skills involved in using questions calling for a set of

related facts and higher order questions. Examples of small discussion groups using these techniques were included. The second film was a protocol-format illustration of these skills. The first half of this film showed a discussion session in which various questioning skills were being employed. The viewer was asked to identify the skill being illustrated at several points during the film. The second half of the film was a rerun of the same discussion session with the questioning skills identified by captions as they occurred.

After viewing these two films, the workshop participants moved on to Part Two of the manual. After all had finished the short quiz at the end of Part Two, a pair of films similar to those described above was shown. These films concentrated on the skills of prompting, seeking further clarification, and refocusing.

Questioning Practice

After completing the Effective Questioning manual, two questioning practice sessions were held. They were conducted in a tutorial format with participants paired and practicing in separate rooms. The first session concentrated on generating questions calling for a set of related facts and higher order questions. Different textual material was provided to each participant in a pair. Each participant generated questions that would be useful in tutoring the textual material. The first participant permitted his "student" to read quickly through the text and then led a ten-minute tutorial discussion, which was tape recorded. The recording of the discussion was then played back and the questions asked were criticized by both participants. The discussion was then repeated,

with the goal of improving the questioning skills. Finally, the entire process was repeated with new textual material and the participants' roles reversed.

The second questioning practice session was identical in format to the first. The skills practiced in this session were prompting, seeking further clarification, and focusing. To ensure that opportunities to use these probing skills would arise, the "student" member of the pair was instructed to respond occasionally with "I don't know" or with incomplete answers to the "tutor's" questions.

Tutorial Practice

The final element of the workshop was a tutorial practice session in which each of the participants had an opportunity to practice all of the listening, explaining, and questioning skills he had learned. The format of the tutorial practice session was similar to that of the questioning practice sessions described above. The textual material provided was longer and more complex than that used in the questioning practice sessions. The tutorial practice session involved approximately one hour of preparation time on the part of the participants. This preparation time was not included as part of the workshop schedule and would normally be given as a "homework" assignment.

Each participant was instructed to prepare a fifteen- to twenty-minute lesson on the textual material provided, incorporating all of the skills described in the workshop. A detailed checklist was provided for use by the participants in evaluating the tape-recorded practice sessions. Each participant delivered his practice lesson once.

Future Development

A longer report on the workshop and a laboratory study in which workshop participants were compared with a control group is in preparation. The results of a preliminary analysis suggest that the listening and explaining segments functioned well, but that the questioning segment will require revision. Further, it is felt that the workshop might be made more useful for teachers by changing the context of the listening training materials from a business context to an educational context.

The listening, explaining, and questioning skills that constitute the subject matter of the workshop are core communication skills vital to successful tutoring, though certainly they are not the only important variables. Future development of the model training system at the Center will consist of efforts to improve the transfer of these three basic skills to the tutorial and other teaching situations and the incorporation of additional skills into the system.

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